

Work Order ID 46273

June 26, 2009 11:50:28 AM



Page 1

Item ID: D3479-1

Accept



Setup Start



Revision ID: B

Stop



Item Name: Tube

Start Date: 15/07/2009 Start Qty: 4.00



Cust Item ID:

Required Date: 03/08/2009 Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan: *MF*

Date: *09/09/24* Tooling:

Date:

Run Start



QC:

Date: SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
----------	--------------

D3479	Rev B
-------	-------

100

0.00



SHEAR

Shear

Memo

0.00

Shear

Cut Flat pattern 2.50" X 8.50" as per Dwg D3479

110

0.00



Small Fab

Small Fab

Memo

0.00

Small Fab

1-Debur 2-Roll part as per Dwg D3479 3-Spot weld as per Dwg D3479 and
Dart QSI 018 4-Fabricate Bead using Rotary Machine as per Dwg D3479 5-
Form as per dwg D3479

120

0.00



QC11- Inspect spot weld per QSI004

QC

Memo

0.00

Quality Control

flto →
see page 41
on old
w/o
5

Work Order ID 46273

June 26, 2009 11:50:28 AM



Page 2

Item ID: D3479-1

Accept



Setup Start



Revision ID: B

Stop



Item Name: Tube

Start Date: 15/07/2009 Start Qty: 4.00



Cust Item ID:

Required Date: 03/08/2009 Req'd Qty: 4.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC5- Inspect part completeness to step on W/O

0.00

5/10/03/02



QC

Memo

0.00

78

Quality Control

140

Identify as per dwg & Stock Location:

63

0.00



Packaging

Memo

0.00

Rec'd 3/10

Packaging

150

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/03/11 HJ

pl 10-3-10

6

June 26, 2009 11:29:12 AM

Parent Item: D3479-1RevB

Parent Item Name: Tube



Comments:

Start Date: 15/07/2009

Required Date: 03/08/2009

Start Qty: 4.00

Required Qty: 4.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
M304S26GA  304/316 0.018 SHEET		Purchased	No				sf	0.0000	0.5600 			

Date: Tuesday, 03/03/2009 4:15:31 PM
 User: Julie Dawson

Process Sheet

Customer :	CU-DAR001 Dart Helicopters Services	Drawing Name :	TUBE
Job Number :	46273		
Estimate Number :	12155		
P.O. Number :		Part Number :	D34791
This Issue :	03/03/2009	S.O. No. :	
Prsht Rev. :	NC	Drawing Number :	D3479 REV.B
First Issue :	/ /	Project Number :	N/A
Previous Run :	44625	Drawing Revision :	B
	Type :	Material :	
	SMALL /MED FAB	Due Date :	20/03/2009
Written By :		Qty:	4
Checked & Approved By :	JLD 09-03-04	Um:	Each
Comment :	Est Rev:A New Issue 06-02-02 JLM Est Rev:B 09-02-17 rev.b as per dwg DD verified by:EC		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
----------------	------------------------------	----------------------

1.0	M304S26GA	304/316 0.018 SHEET
-----	-----------	---------------------



Comment: Qty.: 0.1470 f(s)/Unit Total : 0.5880 f(s)

Pick:

304/316 0.018 SHEET

(M304S26GA)

Batch: 109398

FF 09-04-02

2.0	SHEAR	SHEAR
-----	-------	-------

**Comment:** SHEAR

Cut Flat pattern 2.50" X 8.50" as per Dwg D3479

FF 09-04-02

3.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
-----	-------------	-------------------------------

**Comment:** SMALL & MEDIUM FAB RESOURCE 1

1-Deburr

2-Roll part as per Dwg D3479



3-Spot weld as per Dwg D3479 and Dart QSI 018

4-Fabricate Bead using Rotary Machine as per Dwg D3479

5-Form as per dwg D3479

FF 09-04-02

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
10-03-16	100	Update Memo to cut the correct size per drawing. See NCR below. Plum change				 10/03/16	 10/03/16	

Part No: D3479-1 PAR #: _____ Fault Category: Prod-Eng-Coord. NCR: (Yes) No DQA: _____ Date: 10-03-16
 Resolution: Accepted Disposition: USE AS IS QA: N/C Closed *[Signature]* Date: 10/03/16

NCR: <u>46273</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10/3/09	#2 B.D	Found at inspection that the Parts Do not match the Draw. Also Found that the instruction to cut Flat	<i>[Signature]</i> 10.03.09	- ACCEPTABLE DEVIATION THIS W/O ONLY.	<i>[Signature]</i> 10/03/09	<i>[Signature]</i> 10/03/09	<i>[Signature]</i> 10.03.09	<i>[Signature]</i> 10/03/09
		Pattern Do not match the Draw. who call for 2.00" x 8.00". Draw calls for 2.50" x 8.70".						<i>[Signature]</i> 10/03/09
		Q.L. L.O.P. to Draw.						<i>[Signature]</i> 10/03/09

NOTE: Date & initial all entries

Date: Tuesday, 03/03/2009 4:15:32 PM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE

Job Number: 46273

Part Number: D34791

Job Number:



Seq. #:

Machine Or Operation:

Description :

4.0

QC11

VISUAL INSPECTION OF SPOT WELDING



Comment: VISUAL INSPECTION OF SPOT WELDING

SB 10/03/09

5.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

SB 10/03/09 (4)

6.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

7.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

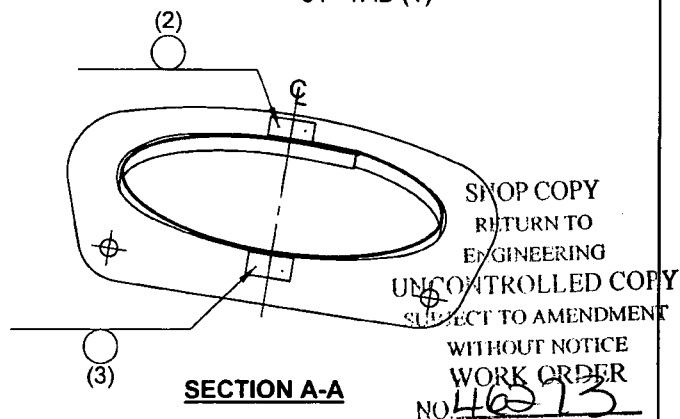
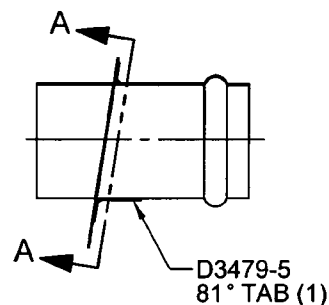
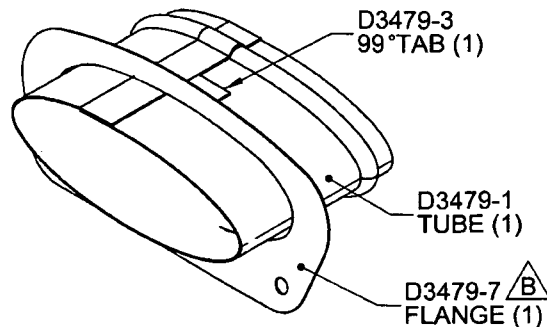
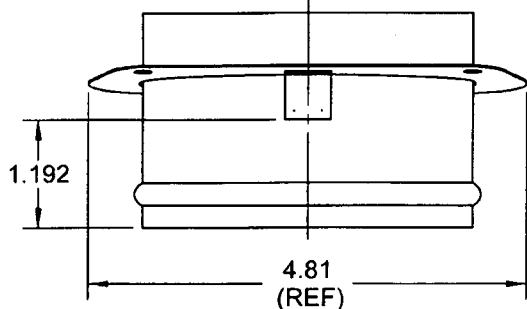
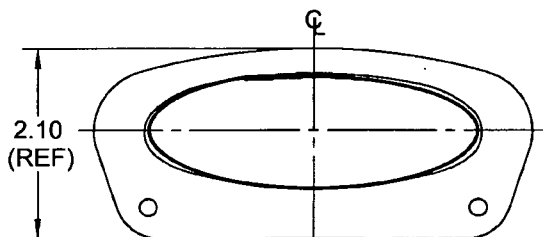
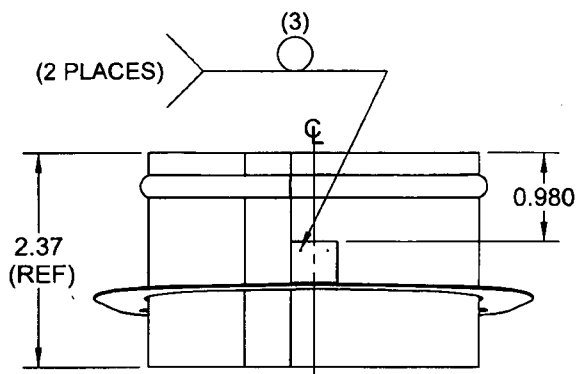
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3479	REV. B SHEET 1 OF 4
DATE 08.12.19		TITLE INLET ADAPTER	SCALE 1:2
A	06.01.19	NEW ISSUE	
B	08.12.19	CORRECT TYPO ON SHT1; ADD TOL ON SHT2; MATL SPEC WAS MIL-S-5019	

RELEASED
[Stamp]



D3479-041 INLET ADAPTER

NOTES:

- 1) SPOT WELD PER DART QSI 018
- 2) FINISH: NONE
- 3) IDENTIFY WITH DART P/N D3479-041 USING FINE POINT PERMANENT INK MARKER
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.010

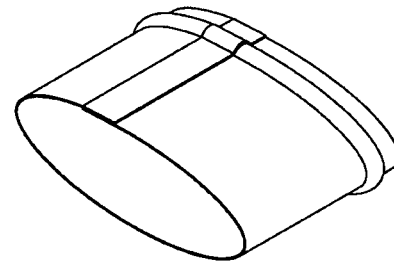
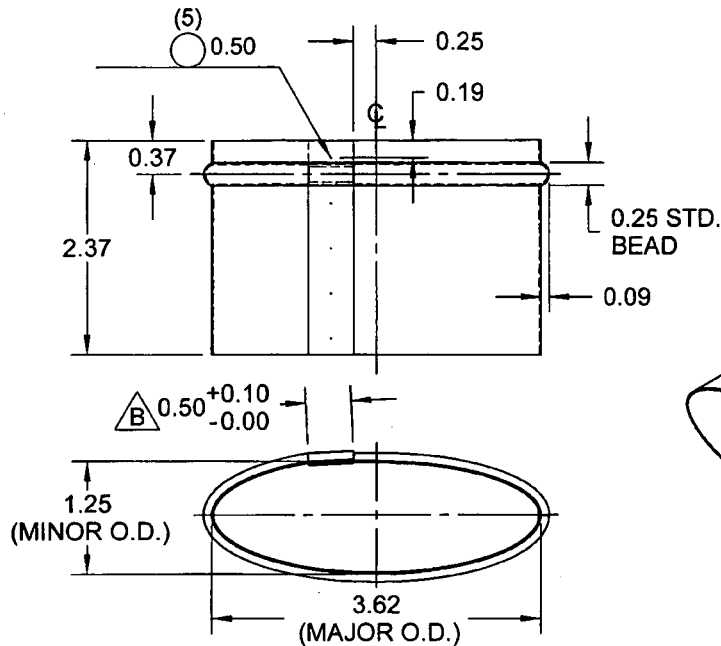
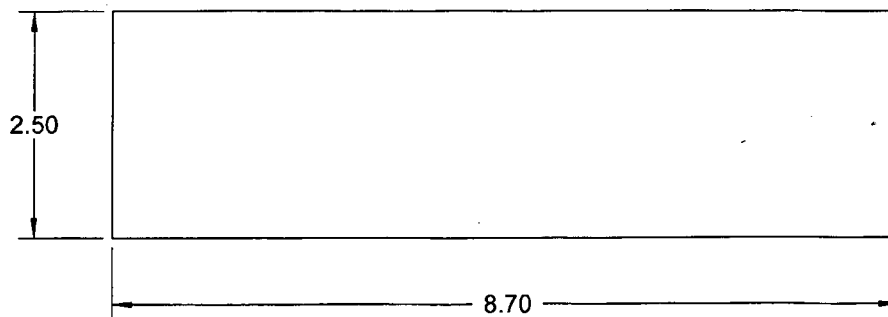
QTY -041	P/N	DESCRIPTION
X	D3479-041	INLET ADAPTER
1	D3479-1	TUBE
1	D3479-3	99 DEGREE TAB
1	D3479-5	81 DEGREE TAB
1	D3479-7	FLANGE

COPYRIGHT © 2006 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

DART

DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3479	REV. B SHEET 2 OF 4
DATE 08.12.19		TITLE INLET ADAPTER	SCALE 1:2

RELEASED
[Stamp]**D3479-1 TUBE****D3479-1F FLAT PATTERN****NOTES:**

- 1) MATERIAL: AISI 304/316 SS SHEET PER MIL-S-5059 (ANNEALED) 2B FINISH, OR AMS 5513/5524, 26 GAUGE SS (0.018 THICK) (REF. DART SPEC. M304S26GA)
- 2) SPOT WELD PER DART QSI 018
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010

SHOP COPY
RETURN TO
ENGINEERING

UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. *460213*

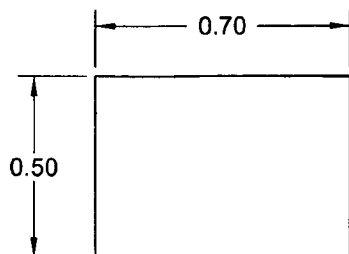
COPYRIGHT © 2006 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



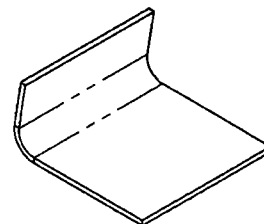
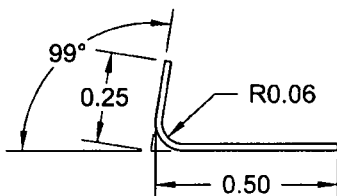
DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3479	REV. B SHEET 3 OF 4
DATE 08.12.19		TITLE ADAPTER INLET	SCALE 2:1

RELEASED
[Stamp]

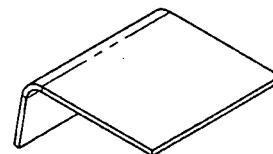
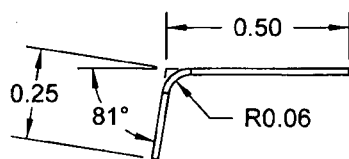


D3479-3F FLAT PATTERN

- 1) MATERIAL: AISI 304/316 SS SHEET PER MIL-S-5059 (ANNEALED) 2B FINISH $\triangle B$
OR AMS 5513/5524, 26 GAUGE SS (0.018 THICK)
(REF. DART SPEC. M304S26GA)



D3479-3 99 DEGREE TAB (MAKE FROM D3479-3F FLAT PATTERN)



D3479-5 81 DEGREE TAB (MAKE FROM D3479-3F FLAT PATTERN)

NOTES:

- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
3) ALL DIMENSIONS ARE IN INCHES
4) BREAK ALL SHARP EDGES 0.005 TO 0.010

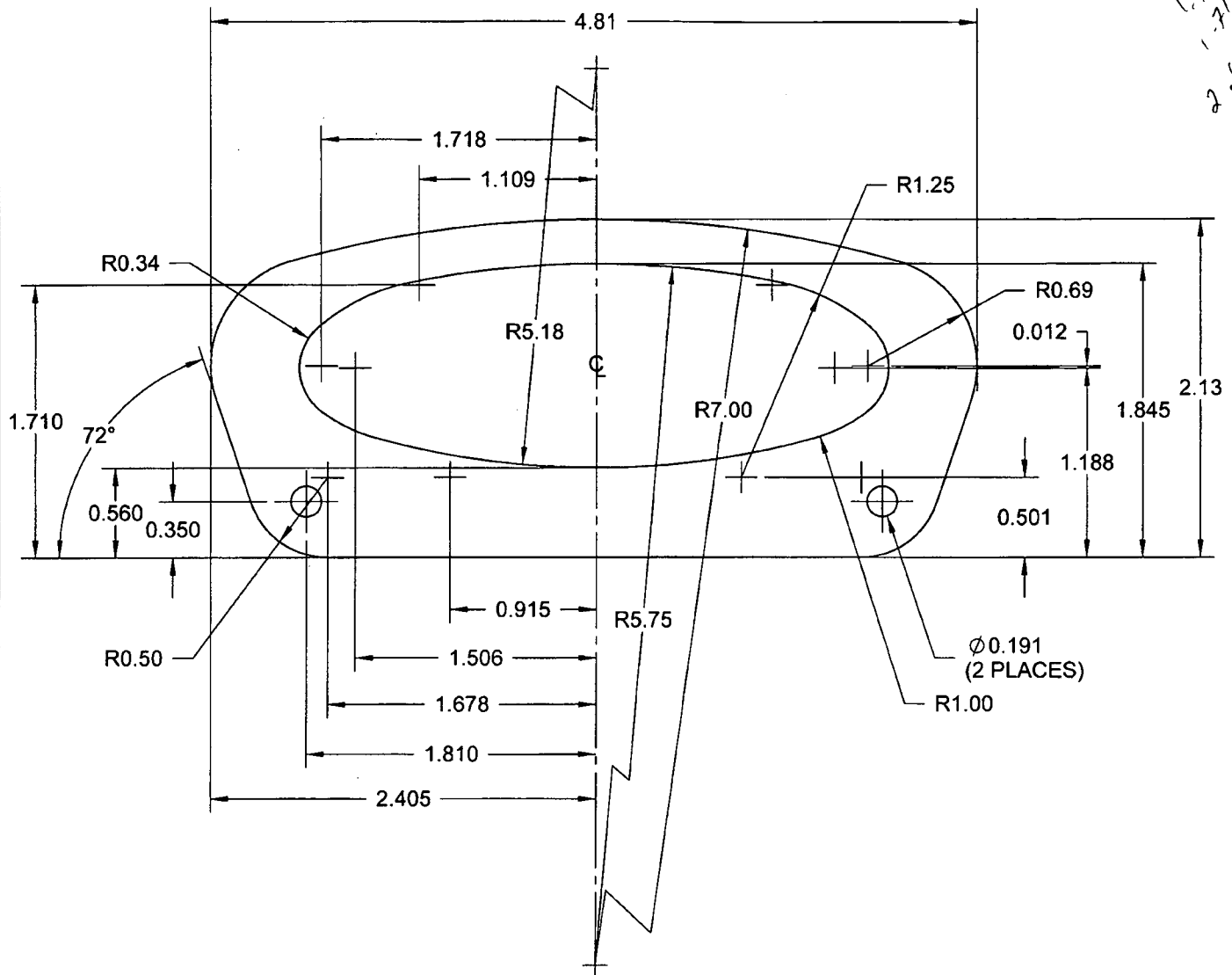
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 46273

COPYRIGHT © 2006 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

DART

DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>RA</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3479	REV. B SHEET 4 OF 4
DATE 08.12.19		TITLE ADAPTER INLET	SCALE 1:1

RELEASED
9/6/30 MP**D3479-7 FLANGE PLATE****NOTES:**

- 1) MATERIAL: AISI 304/316 SS SHEET PER MIL-S-5059 (ANNEALED) 2B FINISH
OR AMS 5513/5524, 26 GAUGE SS (0.018 THICK)
(REF. DART SPEC. M304S26GA)
- 2) PART IS SYMMETRICAL ABOUT CENTERLINE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. *40273*

COPYRIGHT © 2006 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

SPOT WELD TEST RECORD
AMS-W-6858A
CLASS 'C'

TEST NO#: 65

EMPLOYEE: Trans Fracker

PART NUMBER: D24791

JOB NUMBER: B46273

MATERIAL TYPE: 304L

MATERIAL THICKNESS: .048

GROUP SPECIFICATION

- ☐ Group 1: Aluminum & magnesium
☐ Group 2: Iron; nickel; cobalt
☒ Group 3: Titanium SS

TEST RESULTS

	PASS	FAIL	
VISUAL:	[<input checked="" type="checkbox"/>]	[<input type="checkbox"/>]	
PENETRATION:	[<input checked="" type="checkbox"/>]	[<input type="checkbox"/>]	
PULL STRENGTH:	[<input checked="" type="checkbox"/>]	[<input type="checkbox"/>]	PSI Reading: _____

Qualified in accordance with standard AMS-W-6858A and QSI 004 (ref: 4.3)

DATE OF TEST COUPON: 09/04/02
QUALIFIER: SS